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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,185	ITO ET AL.	
	Examiner	Art Unit	
	Leynna T. Truvan	2435	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-24* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-24 are pending.

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (US 7,146,501) in view of Saito (US 5,797,118).

As per claim 1:

Tanaka discloses a data transmission method comprising the steps of performing encryption for information data included in a data packet (col.8, lines 10-14 and 33-36) having [*a data flag formed of a first combination of a plurality of inhibited codes that are not used as information codes representing information*], the information data being formed without using the inhibited codes, so as not to generate the inhibited codes in order to generate encrypted information data that includes no inhibited codes; (col.5, lines 56-67 and col.7, lines 44-58)

replacing the first combination of the plurality of inhibited codes in the data flag in the data packet with a second combination of the inhibited codes, the second combination being different from the first combination, to form an encrypted data packet that has the replaced data flag and that includes the encrypted information data; and (col.7, lines 1-9 and col.8, lines 15-22 and 42-62)

transmitting the encrypted data packet. (col.5, lines 26-31)

However, Tanaka did not include a data flag formed of a first combination of a plurality of inhibited codes that are not used as information codes representing information.

Saito discloses an invention to provide encoding/decoding system employing learning vector quantization that uses a small sized codebook that decreases error (col.2, lines 25-36). Saito includes the codebook stores indexes IDX in one to one correspondence to the respective code vectors that determine the respective code vectors and write prohibition flags. A great number of code vector result in a reduced quantization error and thus high quality encoding and decoding (col.6, lines 50-61).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the invention of Tanaka with Saito to teach a data flag formed of a first combination of a plurality of inhibited codes that are not used as information codes representing information because to have high quality encoding and decoding which decreases error (Saito - col.6, lines 50-61).

As per claim 2: See Tanaka – col.11, lines 12-21 and Saito - col.6, lines 50-61; discussing the data transmission method according to claim 1, wherein error correction data for the encrypted information data is generated along with the encrypted information data, and wherein the error correction data is incorporated in the encrypted data packet.

As per claim 3: See Tanaka - col.6, lines 45-67; discussing the data transmission method according to claim 1, wherein the data packet is included in each of a plurality of data sequences, and wherein the encrypted data packet based on the data packet is formed for every data sequence.

As per claim 4:

Tanaka discloses a data transmission method comprising the steps of performing encryption for information data included in a data packet (col.8, lines 10-14 and 33-36) having [*a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information*], the information data being formed without using the inhibited codes, the data flag being followed by identification data that includes a first code other than the inhibited codes to represent a type of the information data, so as not to generate the inhibited codes in order to generate encrypted information data that includes no inhibited codes; (col.5, lines 56-67 and col.7, lines 44-58)

replacing the first code included in the identification data in the data packet with a second code that is different from the first code and that is other

than the inhibited codes to form an encrypted-data packet that has the data flag followed by the replaced identification data and that includes the encrypted information data; and (col.7, lines 1-9 and col.8, lines 15-22 and 42-62)

transmitting the encrypted data packet. (col.5, lines 26-31)

However, Tanaka did not include a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information.

Saito discloses an invention to provide encoding/decoding system employing learning vector quantization that uses a small sized codebook that decreases error (col.2, lines 25-36). Saito includes the codebook stores indexes IDX in one to one correspondence to the respective code vectors that determine the respective code vectors and write prohibition flags. A great number of code vector result in a reduced quantization error and thus high quality encoding and decoding (col.6, lines 50-61).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the invention of Tanaka with Saito to teach a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information because to have high quality encoding and decoding which decreases error (Saito - col.6, lines 50-61).

As per claim 5: See Tanaka – col.11, lines 12-21 and Saito - col.6, lines 50-61; discussing the data transmission method according to claim 4, wherein error

correction data for the encrypted information data is generated along with the encrypted information data, and wherein the error correction data is incorporated in the encrypted data packet.

As per claim 6: See Tanaka - col.6, lines 45-67; discussing the data transmission method according to claim 4, wherein the data packet is included in each of a plurality of data sequences, and wherein the encrypted data packet based on the data packet is formed for every data sequence.

As per claim 7:

Tanaka discloses a data transmission apparatus comprising:

an encryption processing unit configured to perform encryption for information data included in a data packet (col.8, lines 10-14 and 33-36) having [*a data flag formed of a first combination of a plurality of inhibited codes that are not used as information codes representing information*], the information data being formed without using the inhibited codes, so as not to generate the inhibited codes in order to generate encrypted information data that includes no inhibited codes; (col.5, lines 56-67 and col.7, lines 44-58)

an encrypted-data-packet forming unit configured to replace the first combination of the plurality of inhibited codes in the data flag in the data packet with a second combination of the inhibited codes, the second combination being different from the first combination, to form an encrypted data packet that has the replaced data flag and that includes the encrypted

information data generated by the encryption processing unit; and (col.7, lines 1-9 and col.8, lines 15-22 and 42-62)

a data transmitting unit configured to transmit the encrypted data packet formed by the encrypted-data-packet forming unit. (col.5, lines 26-31)

However, Tanaka did not include a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information.

Saito discloses an invention to provide encoding/decoding system employing learning vector quantization that uses a small sized codebook that decreases error (col.2, lines 25-36). Saito includes the codebook stores indexes IDX in one to one correspondence to the respective code vectors that determine the respective code vectors and write prohibition flags. A great number of code vector result in a reduced quantization error and thus high quality encoding and decoding (col.6, lines 50-61).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the invention of Tanaka with Saito to teach a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information because to have high quality encoding and decoding which decreases error (Saito - col.6, lines 50-61).

As per claim 8: See Tanaka – col.11, lines 12-21 and Saito - col.6, lines 50-61; discussing the data transmission apparatus according to claim 7, wherein the

encryption processing unit generates error correction data for the encrypted information data along with the generation of the encrypted information data, and wherein the encrypted-data-packet forming unit incorporates the error correction data generated by the encryption processing unit in the encrypted data packet.

As per claim 9: See Tanaka - col.6, lines 45-67; discussing the data transmission apparatus according to claim 7, wherein the data packet is included in each of a plurality of data sequences, and wherein a plurality of combinations of the encryption processing unit and the encrypted-data-packet forming unit is provided corresponding to the plurality of data sequences.

As per claim 10:

Tanaka discloses a data transmission apparatus comprising:

an encryption processing unit configured to perform encryption for information data included in a data packet (col.8, lines 10-14 and 33-36) having [*a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information*], the information data being formed without using the reserved codes, the data flag being followed by identification data that includes a first code other than the reserved codes to represent a type of the information data, so as not to generate the inhibited codes in order to generate encrypted information data that does not use the inhibited codes; (col.5, lines 56-67 and col.7, lines 44-58)

an encrypted-data-packet forming unit configured to replace the first code included in the identification data in the data packet with a second code that is different from the first code and that is other than the reserved codes to form an encrypted data packet that has the data flag followed by the replaced identification data and that includes the encrypted information data generated by the encryption processing unit; and (col.7, lines 1-9 and col.8, lines 15-22 and 42-62)

a data transmitting unit configured to transmit the encrypted data packet formed by the encrypted-data-packet forming unit. (col.5, lines 26-31)

However, Tanaka did not include a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information.

Saito discloses an invention to provide encoding/decoding system employing learning vector quantization that uses a small sized codebook that decreases error (col.2, lines 25-36). Saito includes the codebook stores indexes IDX in one to one correspondence to the respective code vectors that determine the respective code vectors and write prohibition flags. A great number of code vector result in a reduced quantization error and thus high quality encoding and decoding (col.6, lines 50-61).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the invention of Tanaka with Saito to teach a data flag formed of a predetermined combination of a plurality of inhibited codes that are

not used as information codes representing information because to have high quality encoding and decoding which decreases error (Saito - col.6, lines 50-61).

As per claim 11: See Tanaka – col.11, lines 12-21 and Saito - col.6, lines 50-61; discussing the data transmission apparatus according to claim 10, wherein the encryption processing unit generates error correction data for the encrypted information data along with the generation of the encrypted information data, and wherein the encrypted-data-packet forming unit incorporates the error correction data generated by the encryption processing unit in the encrypted data packet.

As per claim 12: See Tanaka - col.6, lines 45-67; discussing the data transmission apparatus according to claim 10, wherein the data packet is included in each of a plurality of data sequences, and wherein a plurality of combinations of the encryption processing unit and the encrypted-data-packet forming unit is provided corresponding to the plurality of data sequences.

As per claim 13:

Tanaka discloses a data reception method comprising the steps of receiving encrypted data packet that is transmitted (col.5, lines 26-31 and col.8, lines 10-14) and that has [*a data flag formed of a second combination of a plurality of inhibited codes that are not used as information codes representing information*], with which second combination of the inhibited codes a first combination of the inhibited codes is replaced, the second combination being

different from the first combination, the encrypted data packet including encrypted information data that includes no reserved codes and that results from encryption performed for information data formed without using the inhibited codes so as not to generate the inhibited codes; (col.5, lines 56-67 and col.7, lines 44-58)

performing decryption for the encrypted information data included in the encrypted data packet to generate reproduced information data; detecting the data flag included in the encrypted data packet; and (col.7, lines 1-9 and col.8, lines 15-62)

extracting the reproduced information data in accordance with a detection output resulting from the detection. (col.6, lines 45-67)

However, Tanaka did not include a data flag formed of a second combination of a plurality of inhibited codes that are not used as information codes representing information.

Saito discloses an invention to provide encoding/decoding system employing learning vector quantization that uses a small sized codebook that decreases error (col.2, lines 25-36). Saito includes the codebook stores indexes IDX in one to one correspondence to the respective code vectors that determine the respective code vectors and write prohibition flags. A great number of code vector result in a reduced quantization error and thus high quality encoding and decoding (col.6, lines 50-61).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the invention of Tanaka with Saito to teach a data flag formed of a second combination of a plurality of inhibited codes that are not used as information codes representing information because to have high quality encoding and decoding which decreases error (Saito - col.6, lines 50-61).

As per claim 14: See Tanaka – col.11, lines 12-21 and Saito - col.6, lines 50-61; discussing the data reception method according to claim 13, wherein the encrypted data packet has the data flag and includes error correction data for the encrypted information data along with the encrypted information-data, and wherein the error correction data included in the encrypted data packet is received to perform error correction for the encrypted information data by using the error correction data and the decryption is performed for the encrypted information data subjected to the error correction to generate the reproduced information data.

As per claim 15: See Tanaka - col.6, lines 45-67; discussing the data reception method according to claim 13, wherein the encrypted data packet is included in each of a plurality of data sequences, and wherein, for every data sequence, the decryption is performed for the encrypted information data included in the encrypted data packet, the data flag included in the encrypted data packet is detected, and the reproduced information data is extracted.

As per claim 16:

Tanaka discloses a data reception method comprising the steps of receiving encrypted data packet that is transmitted (col.5, lines 26-31 and col.8, lines 10-14), that has [*a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information*], and that includes encrypted information data resulting from encryption performed for information data formed without using the inhibited codes so as not to generate the inhibited codes and including no reserved codes, the data flag being followed by identification data that has a second code other than the inhibited codes, with which second code a first code that is other than the inhibited codes and that represents a type of the information data is replaced, the second code being different from the first code; (col.5, lines 56-67 and col.7, lines 44-58)

performing decryption for the encrypted information data included in the encrypted data packet to generate reproduced information data;

detecting the identification data included in the encrypted data packet; and (col.7, lines 1-9 and col.8, lines 15-62)

extracting the reproduced information data in accordance with a detection output resulting from the detection. (col.6, lines 45-67)

However, Tanaka did not include a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information.

Saito discloses an invention to provide encoding/decoding system employing learning vector quantization that uses a small sized codebook that decreases error (col.2, lines 25-36). Saito includes the codebook stores indexes IDX in one to one correspondence to the respective code vectors that determine the respective code vectors and write prohibition flags. A great number of code vector result in a reduced quantization error and thus high quality encoding and decoding (col.6, lines 50-61).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the invention of Tanaka with Saito to teach a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information because to have high quality encoding and decoding which decreases error (Saito - col.6, lines 50-61).

As per claim 17: See Tanaka – col.11, lines 12-21 and Saito - col.6, lines 50-61; discussing the data reception method according to claim 16, wherein the encrypted data packet has the data flag followed by the identification data and includes error correction data for the encrypted information data along with the encrypted information data, and wherein the error correction data included in the encrypted data packet is received to perform error correction for the encrypted information data by using the error correction data and the decryption is performed for the encrypted information data subjected to the-error correction to generate the reproduced information data.

As per claim 18: See Tanaka - col.6, lines 45-67; discussing the data reception method according to claim 16, wherein the encrypted data packet is included in each of a plurality of data sequences, and wherein, for every data sequence, the decryption is performed for the encrypted information data included in the encrypted data packet, the identification data included in the encrypted data packet is detected, and the reproduced information data is extracted.

As per claim 19:

Tanaka discloses a data reception apparatus comprising:

a data-sequence reproducing unit configured to receive encrypted data packet that is transmitted (col.5, lines 26-31 and col.8, lines 10-14) and that has [*a data flag formed of a second combination of a plurality of inhibited codes that are not used as information codes*], representing information, with which second combination of the inhibited codes a first combination of the inhibited codes is replaced, the second combination being different from the first combination, the encrypted data packet including encrypted information data that includes no inhibited codes and that results from encryption performed for information data formed without using the inhibited codes so as not to generate the inhibited codes; (col.5, lines 56-67 and col.7, lines 44-58)

a decryption processing unit configured to perform decryption for the encrypted information data included in the encrypted data packet received by the data-sequence reproducing unit to generate reproduced information data;

a data detecting unit configured to detect the data flag included in the encrypted data packet; and (col.7, lines 1-9 and col.8, lines 15-62)

a data selecting unit configured to extract the reproduced information data generated by the decryption processing unit in accordance with a detection output supplied from the data detecting unit. (col.6, lines 45-67)

However, Tanaka did not include a data flag formed of a second combination of a plurality of inhibited codes that are not used as information codes.

Saito discloses an invention to provide encoding/decoding system employing learning vector quantization that uses a small sized codebook that decreases error (col.2, lines 25-36). Saito includes the codebook stores indexes IDX in one to one correspondence to the respective code vectors that determine the respective code vectors and write prohibition flags. A great number of code vector result in a reduced quantization error and thus high quality encoding and decoding (col.6, lines 50-61).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the invention of Tanaka with Saito to teach a data flag formed of a second combination of a plurality of inhibited codes that are not used as information codes because to have high quality encoding and decoding which decreases error (Saito - col.6, lines 50-61).

As per claim 20: See Tanaka – col.11, lines 12-21 and Saito - col.6, lines 50-61;

discussing the data reception apparatus according to claim 19, wherein the encrypted data packet has the data flag and includes error correction data for the encrypted information data along with the encrypted information data, and wherein the decryption processing unit receives the error correction data included in the encrypted data packet to perform error correction for the encrypted information data by using the error correction data and the decryption is performed for the encrypted information data subjected to the error correction to generate the reproduced information data.

As per claim 21: See Tanaka - col.6, lines 45-67; discussing the data reception apparatus according to claim 19, wherein the encrypted data packet is included in each of a plurality of data sequences, and wherein a plurality of combinations of the decryption processing unit, the data detecting unit, and the data selecting unit is provided corresponding to the plurality of data sequences.

As per claim 22:

Tanaka discloses a data reception apparatus comprising:

a data-sequence reproducing unit configured to receive encrypted data packet that is transmitted (col.5, lines 26-31 and col.8, lines 10-14), that has [*a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information*], and that includes encrypted information data resulting from encryption performed for information data formed without using the inhibited codes so as not to

generate the inhibited codes and including no inhibited codes, the data flag being followed by identification data that has a second code other than the inhibited codes, with which second code a first code that is other than the inhibited codes and that represents a type of the information data is replaced, the second code being different from the first code; (col.5, lines 56-67 and col.7, lines 44-58)

a decryption processing unit configured to perform decryption for the encrypted information data included in the encrypted data packet received by the data-sequence reproducing unit to generate reproduced information data;

a data detecting unit configured to detect the identification data included in the encrypted data packet; and (col.7, lines 1-9 and col.8, lines 15-62)

a data selecting unit configured to extract the reproduced information data generated by the decryption processing unit in accordance with a detection output supplied from the data detecting unit. (col.6, lines 45-67)

However, Tanaka did not include a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information.

Saito discloses an invention to provide encoding/decoding system employing learning vector quantization that uses a small sized codebook that decreases error (col.2, lines 25-36). Saito includes the codebook stores indexes IDX in one to one correspondence to the respective code vectors that determine the respective code vectors and write prohibition flags. A great number of code

vector result in a reduced quantization error and thus high quality encoding and decoding (col.6, lines 50-61).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the invention of Tanaka with Saito to teach a data flag formed of a predetermined combination of a plurality of inhibited codes that are not used as information codes representing information because to have high quality encoding and decoding which decreases error (Saito - col.6, lines 50-61).

As per claim 23: See Tanaka – col.11, lines 12-21 and Saito - col.6, lines 50-61; discussing the data reception apparatus according to claim 22, wherein the encrypted data packet has the data flag followed by the identification data and includes error correction data for the encrypted information data along with the encrypted information data, and wherein the decryption processing unit receives the error correction data included in the encrypted data packet to perform error correction for the encrypted information data by using the error correction data and the decryption is performed for the encrypted information data subjected to the error correction to generate the reproduced information data.

As per claim 24: See Tanaka - col.6, lines 45-67; discussing the data reception apparatus according to claim 19, wherein the encrypted data packet is included in each of a plurality of data sequences, and wherein a plurality of combinations of the decryption processing unit, the data detecting unit, and

the data selecting unit is provided corresponding to the plurality of data sequences.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leynna T. Truvan whose telephone number is (571) 272-3851. The examiner can normally be reached on Monday - Thursday (7:00 - 5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. T. T./

Examiner, Art Unit 2435

/Kimyen Vu/

Supervisory Patent Examiner, Art Unit 2435